

REMARKS

Claims 9-16, 33 and 35-38 are pending in the Application. Claims 1-8, 17-32 and 34 are cancelled without prejudice. Claims 9-16 and 33 stand rejected. Claims 9, 11-16, 33, and 35-38 have been amended to more particularly point out Applicants' invention and the amendments find support in the claims and in the specification. For example, claim 9 finds support at page 11, lines 3-26. Claims 11-12 are amended for clarity of language and find support, for example, in the claims. Claim 13 finds support, for example, at page 8, lines 18-24 and page 11, lines 3-26. Claims 14-16, 33 and 35-38 find support, for example, at page 9, line 19- page 10, line 21 and page 11, lines 3-26. The amendment to the specification finds support, for example, at page 10, lines 14-17. The specification section is amended to correct a typographical error where a section of a previous paragraph was substituted into the next paragraph. This correction agrees with the application at page 10, lines 14-17 as well as the French priority document. No new matter is introduced by the Amendment. In addition, the amendments to claims 9, 11, 12, and 13 are not intended narrow the scope of the claims.

Information Disclosure Statement

The Examiner objected to the Information Disclosure Statement, indicating that Applicants have not provided legible copies of each of the patent and non-patent literature listed on form 1449 and have not elaborated the reason for listing those references or how they relate to the claimed invention. Legible copies of the patent and non-patent literature listed on form 1449 were submitted on November 29, 2001. For the Examiner's convenience, another copy of each reference is enclosed herewith. The Information Disclosure Statement lists a foreign patent that

is available only in German (enclosed). However, the same German patent (10002106) was also listed in the search report generated by the French patent office. If the information listed (German patent) is not in the English language, but "...was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office." (MPEP 609 A(3)). We have an English translation of the content of the search report and an English version of the EPO form used by the French Patent Office. The combination makes the relevance of the German patent (10002106) clear.

Priority

The Examiner indicated that a certified copy of the French application, upon which foreign priority is based, was not filed. Applicants have included a certified copy of the French application with this amendment. However, as noted by the enclosed copies of transmittal papers and a return receipt post card, a certified copy of the French application was filed with the Patent Office on January 22, 2002.

Objection to Specification

The Examiner objected to the specification because page 2, line 8 was on a defective/damaged sheet of paper. A replacement sheet of page 2 of the application is included with this Amendment. Applicants respectfully request withdrawal of the objection to the specification.

Rejection Under 35 U.S.C. §112, first paragraph

Claims 9-16 and claim 33 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains to make and/or use the invention. The Examiner asserted that the Applicants have not disclosed a sample preparation step for infrared spectrophotometric analysis of a sample of wine, grape must or fermenting must. In particular, the Examiner asserted that samples need to be dried. This assertion is not supported by the Pavia et al. reference cited by the Examiner.

The Pavia et al. reference indicates, in a discussion of sample preparation for infrared spectroscopy, that metal halides such as sodium chloride, potassium bromide, and silver chloride are commonly used to construct sample cells. The discussion continues that sodium chloride plates are used to fabricate sample cells, but there are disadvantages; sodium chloride plates cleave easily and sodium chloride is water-soluble. Therefore, when using sodium chloride sample cells, samples must be dry before a spectrum can be obtained. (Pavia et al., Introduction to Organic Laboratory Techniques, 1988, Saunders College Publishing, page 660, lines 3-9) It is in the context of the discussion of sodium chloride sample cells that that the observation is made for the need for dry samples. Thus, the Examiner has not asserted *prima facie* lack of enablement.

Applicants' specification provides information regarding sample preparation by indicating that a sample of the liquid to be tested (e.g. wine, grape must, or fermenting must) is taken and conveyed into an analysis cell (page 3, lines 28-30; page 5, lines 23-33). In addition, the Pavia et al. reference noted by the Examiner refers to the "...simplest method of preparing

the sample, if it is a liquid..." and indicates that windows of silver chloride can be used for aqueous solutions. (Pavia et al., Introduction to Organic Laboratory Techniques, 1988, Saunders College Publishing, page 660, lines 10-14). In contrast with sodium chloride, silver chloride is not soluble in water. Hence, methods of infrared spectrophotometric analysis of aqueous liquids are well known in the chemical arts.

Since methods of infrared spectrophotometric analysis of aqueous liquids are well known in the chemical arts, one skilled in the art would be enabled to practice Applicants' claimed invention. Thus, Applicants respectfully request that the rejection of claims 9-16 and 33 under 35 U.S.C. §112, first paragraph, be withdrawn.

Rejection Under 35 U.S.C. §112, second paragraph

Claims 9-16 and claim 33 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Claims 9-16 and 33 have been amended to clarify the subject matter of Applicants' invention.

Claim 9 has been rewritten to more clearly claim Applicants' invention. Failure to recite one or more essential steps (e.g. sample preparation) has been addressed in the response to the rejection under 35 U.S.C. §112, first paragraph, above. Antecedent basis has been provided for the limitation "the wine and/or grape must and/or fermenting grape must" of lines 16-17. In addition, references in claim 9 to concentrations of various chemicals indicating the presence of certain microbiological agents have been removed and are included in claims 14-16, 33, and 35-38, where the presence of a certain group of microbiological agents is correlated with the

presence of a certain compound. Claims 12 and 13 have been amended, as suggested by the Examiner, by using “further comprising” language. Claims 9, 14-16 and 33 have been rewritten such that antecedent basis in claim 9 for the limitations in claims 14-16 and 33 is no longer required, since the recitation of the presence of certain chemicals is now first noted in claims 14-16 and 33, and not in claim 9. The Examiner asserted that claims 16 and 33 were rendered indefinite because the use of “acetic bacteria” and “lactic bacteria” respectively, was not clear. Claims 16 and 33 have been amended to indicate that the bacteria convert some compound to acetic acid and lactic acid, respectively.

In view of the above comments, the presently presented claims are clear. Applicants respectfully request withdrawal of the rejection of claims 9-16 and claim 33 under 35 U.S.C. §112, second paragraph.

Rejection Under 35 U.S.C. §102 (b)

The Examiner rejected claims 9-13 under 35 U.S.C. §102 (b) as being anticipated by the Abstract from Patz et al. (Wien Wissenschaft, 1999, 54 pages 80-87) with evidence provided by Asselain et al. (U.S. Patent No. 5,453,619, the “Asselain patent”). Applicants maintain that Applicants’ invention is not disclosed by the Patz et al. Abstract, with support by the Asselain patent, and thus the Patz et al. Abstract does not render Applicants’ invention *prima facie* anticipated. Applicant respectfully requests reconsideration of the rejections based upon the amended claims and following comments.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference.” (MPEP 2131 citing *Verdegaal v. Union Oil Co. of California*).

The Patz et al. Abstract does not correlate spectroscopic criteria and the absorbance spectrum using a mathematical processing means, nor does it disclose the recording of spectroscopic criteria in the memory of a mathematical processing means. In addition, the Patz et al. Abstract does not disclose the automatic determination of concentration levels of constituents of the wine, grape must or fermenting must sample. It is incongruous that the Examiner asserts that the Patz et al. Abstract is enabling for an anticipation rejection with no description of obtaining the spectrum at all, while rejecting Applicants' specification for lack of enablement. The Asselain patent is irrelevant for this anticipation rejection because it does not support clarification of an inherent feature in the Patz et al. reference. Since the Patz et al. Abstract does not *prima facie* disclose Applicants' claimed invention, Applicants respectfully request the withdrawal of the rejection of claims 9-13, as amended.

Rejection Under 35 U.S.C. §103(a)

The Examiner rejected claims 9-16 and claim 33 under 35 U.S.C. §103(a) as obvious over the Abstract from Patz et al. (Wein Wissenschaft, 1999, 54 Pages 80-87) and Asselain et al. (U.S. Patent No. 5,453,619, "the Asselain patent") in view of Singleton et al. (Singleton, P. et al. Dictionary of Microbiology and Molecular Biology, 1991, John Wiley and Sons. Pgs. 485 and 956) and Abstracts from Ui et al. (Ui, S. et al., Hakkokokgaku Kaishi 1986, 64 Pages 161-168), Omori et al. (Omori, T. et al., J. Fermentation and Bioengineering, 1997, Vol. 83 Pages 64-69) and Sponholtz et al. (Sponholtz, W.R., Chemie Mikrobiologie Technologie der Lebensmittel, 1986. Volume 10, Pages 19-24). Applicants maintain that these references do not render the

claims *prima facie* obvious. Applicants respectfully request reconsideration of the rejection based upon the following comments.

The Examiner indicated that it would have been obvious to combine the Patz et al. Abstract, which teaches a method to determine concentrations of different components of wine through FTIR spectroscopy and chemometrics with the Asselain patent, which teaches mathematical equations to obtain, generally, the concentration of different components of an aqueous liquid.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify or combine the reference teachings and the prior art references must teach or suggest all the claim limitations. (MPEP 2143). First, there is no motivation to combine the Patz et al. Abstract with the Asselain patent. The Patz et al. Abstract teaches that FTIR spectroscopy and chemometrics were combined to create a calibration for alcohol, tartaric acid, lactic acid, malic acid, total acid, pH, volatile acids, reducing sugars, fructose, glucose, total SO₂, total phenols and glycerol in wine. Asselain teaches a method of spectrophotometric assay of aqueous liquids and a method of determining concentrations of components of the liquid through the use of equations. Asselain mentions the possible assay of milk components (Col. 2, lines 40-41). However, Asselain does not teach or suggest the determination of the components of wine, grape must or fermenting must. The two references are directed to different subject matter; creating calibrations for certain chemicals, and the use of mathematical equations to determine concentrations of components of liquids. Hence, there is no motivation or suggestion to combine the two references.

Secondly, neither the Patz et al. Abstract, the Asselain patent, or their combination teaches or suggests the recording of spectrophotometric criteria and the automatic determination of concentrations of constituents of wine, grape must or fermenting must. Hence, the references do not teach or suggest all the claim limitations of Applicants' invention.

Since the Patz et al. Abstract and the Asselain patent do not provide any motivation to combine their teachings and the references do not teach or suggest all the claim elements of Applicants' invention, the Examiner has not established a *prima facie* case of obviousness.

The Singleton, Ui et al., Omori et al., and Sponholtz et al., references provide disparate pieces of information relating to components of wine, with no suggestion or motivation to modify or combine the information in the reference teachings. Neither do the references individually, or in combination, teach the use of infrared spectroscopy to automatically determine concentrations of certain constituents of wine, grape must or fermenting must, and to correlate those results with the presence of microbiological agents.

None of the references cited by the Examiner, individually or in combination, suggest or teach the recordation of spectrophotometric criteria in a memory of a mathematical processing means and the use of spectrophotometric criteria to automatically determine the presence of constituents of wine, grape must, or fermenting must. Thus, the references alone or together do not teach all of the claim elements.

Since the combined teachings of the Patz et al. Abstract and the Asselein patent, do not teach, suggest or motivate Applicants' claimed invention, Applicants respectfully request the withdrawal of the rejection of claims 9-16 and 33.

CONCLUSIONS

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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